Hilton San Diego/Del Mar

San Diego, CA

February 18-19, 2015

NIST Community Resilience Program – Fourth Stakeholder Workshop

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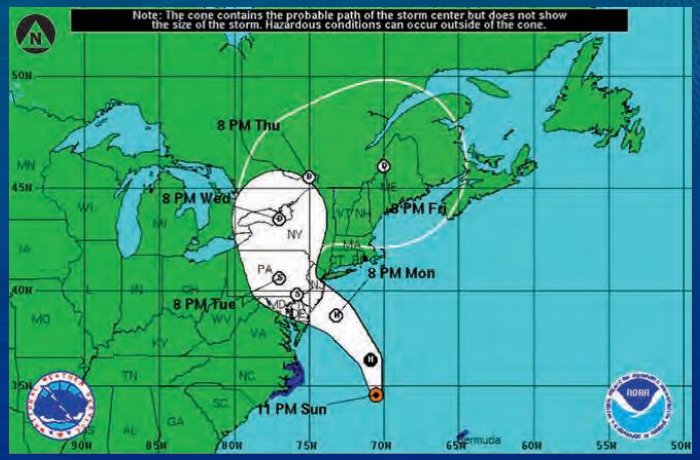
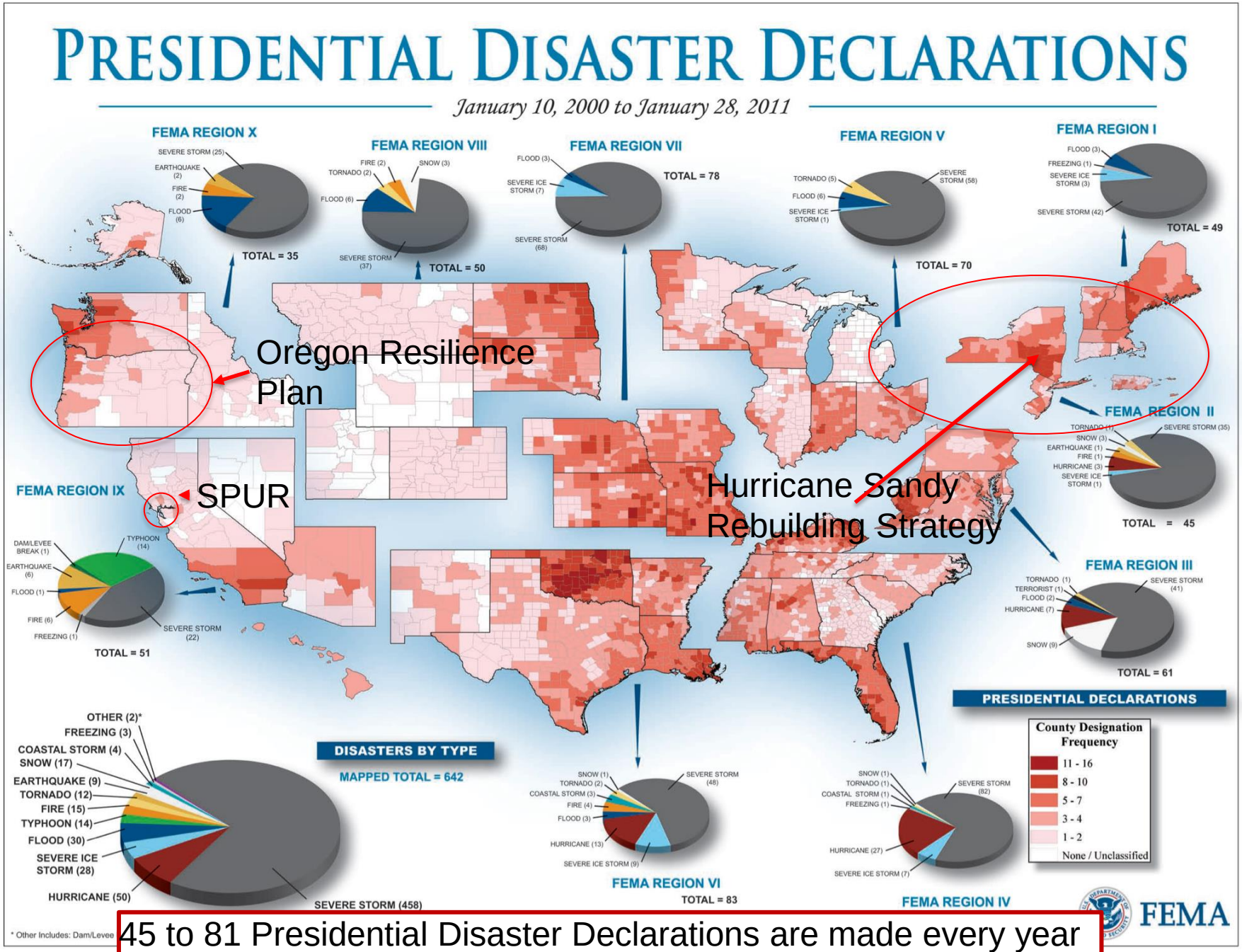
What is the Problem?

- Natural and man-made disasters cause an estimated $57B in average annual costs.
- Superstorm Sandy caused over $65B in losses.
- Large single events can cause losses exceeding $100B.
- Current approach of response and rebuilding is impractical and inefficient for dealing with natural disasters.
- Planning does not account for interconnected nature of buildings and infrastructure, nor for the affect on social institutions.
- Changing nature of hazards is not always considered.





45 to 81 Presidential Disaster Declarations are made every year

What is Disaster Resilience?

- The term "resilience" means the ability to *prepare for* and *adapt to* changing conditions and *withstand* and *recover rapidly* from disruptions*
- In the context of community resilience, the emphasis is not solely on mitigating risk, but implementing measures to ensure that the community recovers to normal, or near normal function, in a reasonable timeframe.

*As defined in Presidential Policy Directive 21.

Community Needs Drive Functional Requirements for Buildings and Infrastructure

- The effects of hazards often result in damage to buildings and infrastructure.
- The consequences are felt in the social and economic systems and can have far-reaching effects.

Community Resilience for the Built Environment

- Natural hazards
- Manmade hazards
- Degradation
- Climate change

- Performance Goals
- Mitigation
- Response
- Recovery

Goal: Limit disruption to a tolerable duration for an expected (design level) event, and minimize detrimental effects to the community.

Attributes of Resilience

- Functionality – Resilience should be based on the ability of social systems to resume function within a prescribed period of time following an expected event. Buildings and infrastructure must be functional to support these social systems.
- Dependencies – Resilience must consider the dependencies of buildings and infrastructure *and* the relationship of individuals and organizations with the built environment.

Attributes of Resilience (Cont.)

- Three levels of hazard
  - Routine
  - Expected (design level)
  - Extreme
- Time basis – Resilient performance will require a timescale for when buildings and infrastructure need to be returned to service to meet social needs.
- Three phases of recovery for resilience
  - Short Term (Days)
  - Intermediate (Weeks)
  - Long-Term (Months/Years)

Framework Development Process

Workshop Agenda

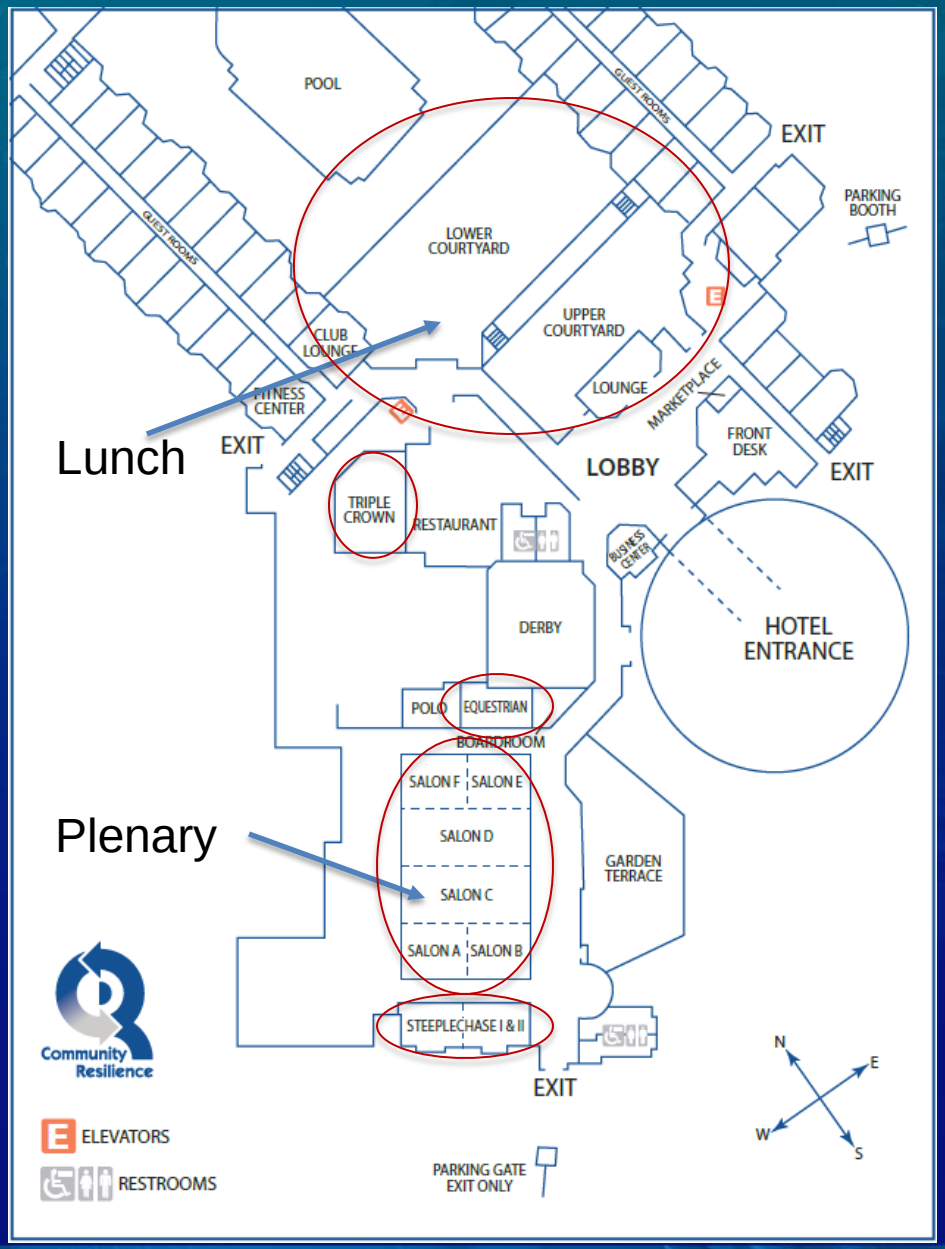
Wednesday, February 18

8:30-9:15	Opening Session
9:30-10:15	Plenary – Disaster Resilience Framework Overview
10:15-10:30	Break
10:30-12:15	Plenary – Disaster Resilience Framework Overview - Continued
12:15-1:15	Lunch Break
1:15-2:15	Plenary Speaker – Laurie Johnson **Foundational Elements of Community Disaster Resilience, Pre-, and Post-Disaster**
2:15-2:30	Transition to Breakouts
2:15-5:00	Breakout 1: Framework and DRSP
5:00	Adjourn

Workshop Agenda
Thursday, February 19

8:00-8:30	Community Resilience Center of Excellence Announcement
8:30-10:00	Plenary – **Planning and Implementation for Community Resilience**
10:15-10:30	Break
10:30-12:00	Breakout 1: Planning and Implementation
12:00-1:00	Lunch Break
1:00-2:15	Final Report out and Wrap up
2:15	Adjourn

Event Locations

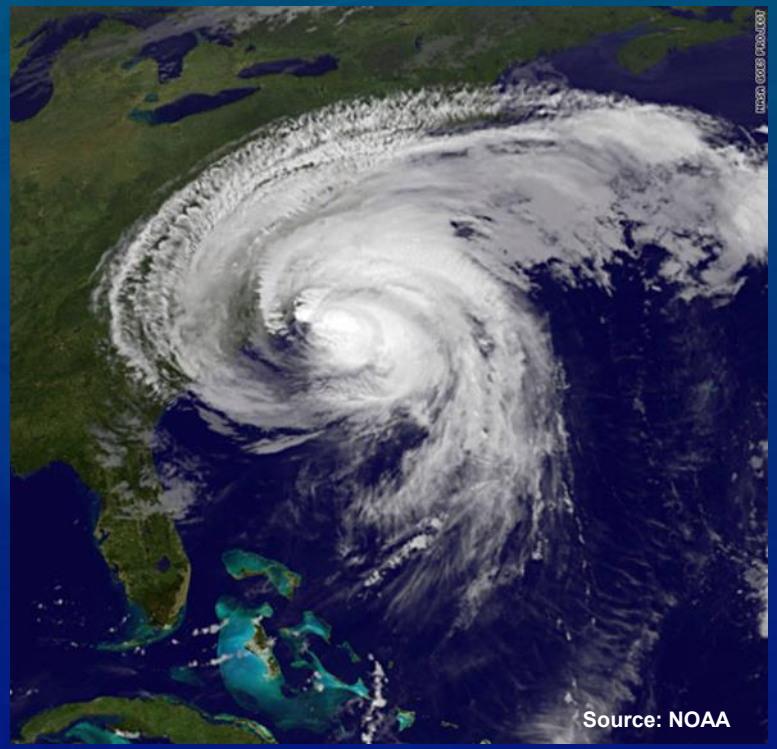


Breakout Session Locations

1. Community Resilience – Equestrian
2. Buildings – Salon E
3. Transportation – Salon A
4. Power and Energy Systems – Salon B
5. Water and Wastewater Systems – Salon D
6. Communications – Salon F
7. Social Aspects of Resilience Steeple Chase II
8. Resilience Metrics – Steeple Chase I
9. Disaster Resilience Standards Panel – Triple Crown

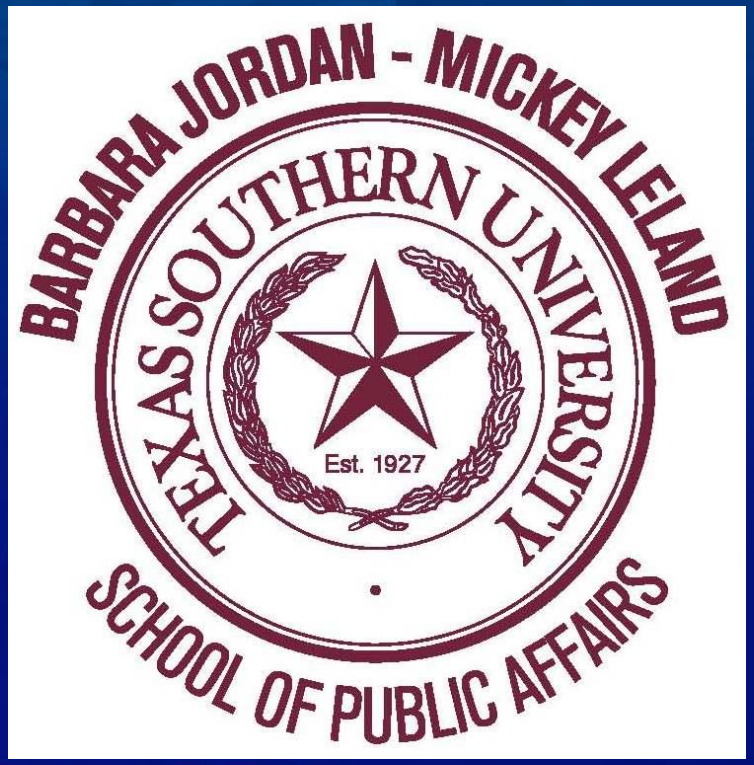
A Successful Workshop will…

- Gather final input on the Disaster Resilience Framework Draft
- Engage you as stakeholders for continued input
- Develop interest for membership in the DRSP



April Workshop

- Purpose: Release of Draft Disaster Resilience Framework for public comment
- Venue: Texas Southern University, Houston, Texas
- Date: April 27, 2015



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Questions?